

### **ABSTRACT**

A non-destructive method for evaluating the strength of cancellous bone, includes the steps of performing at least two of the following test on each cancellous bone of a population of cancellous bones, namely, a manual compression test, an apparent density test, and an appearance test; determining a compressive strength for each cancellous bone based on the two tests performed; comparing the determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and eliminating a subset of cancellous bone from the population of cancellous bone, which subset of cancellous bone fails to meet the predetermined compressive strength requirement.